How teachers use prosody to guide students towards an adequate answer

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ABSTRACT

This paper focuses on the role prosodic features play in displaying evaluative stance in desk talks and oral exams in Norwegian secondary schools. We explore the extent to which teachers make available, to students, their treatment of student answers as more, or less, adequate with the acknowledgment token "ja" (*yeah/yes*). We found that, within extended question-answer sequences, acknowledgments with wider pitch spans treated a student answer as less adequate compared to acknowledgments with narrow pitch span. We show how the prosodic design of third turn acknowledgments is consequential to how both teachers and students proceed pursuing an adequate answer, and to how teachers subsequently attempt to remedy any negative interpretation of their evaluation. The paper demonstrates how prosodic features can direct the further trajectory of question-answer sequences, without, or prior to, making any distinct evaluation explicit. We discuss the relevance and limits of prosodic features to teachers' assessment practices.

Keywords: Teaching, assessment, classroom interaction, prosody, conversation analysis, acknowledgment token

1. Introduction

In educational contexts, not all answers are treated as equally adequate as an answer to a question, and educators routinely steer students' problem solving through various interactional means, towards an adequate answer (e.g., Lee, 2007). Research has shown how various linguistic and multimodal resources support this steering process (Lee, 2007; Margutti & Drew, 2014), but there remains further scope for identifying how different types of evaluation are associated with specific prosodic features such as pitch, loudness and voice quality. This paper explores how teachers and students use prosodic features systematically to differentiate more, or less, adequate answers in evaluation sequences. This research has implications for understanding in detail the range of subtle, implicit resources educators employ in their everyday practice to guide and support students.

Our analysis explores teacher – student interactions in "desk talk"[1] and oral exams[2] in Norwegian secondary schools. The target of the analysis is teachers' design of "acknowledgment tokens"[3] (Jefferson, 1984; 1993) produced in third position - that is, the turn following a teacher/examiner question and a student answer. Different forms of acknowledgment tokens, such as "mhm", "yeah", "okay", are well documented across English languages (Gardner, 2001; Jefferson, 1984) and in other languages including Mandarin (Xu, 2016). In Norwegian, like in English and other languages, acknowledgment tokens can be produced vocally both with lips closed ("mhm" or "mm" in English; "mm" in Norwegian), with opens lips ("uh-huh" in English, "øøh" in Norwegian), and with lexically more explicit agreement forms (e.g. "yes" or "yeah" in English; "ja" in Norwegian). Research on the relationship between lexical and prosodic forms sits at the interface between linguistics and conversation (see Couper-Kuhlen & Selting, 1996), and also between linguistics and educational practice. In educational contexts, acknowledgment tokens are one of many resources available for teachers to show their evaluative stance toward a

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[1] We define desk talk as interactions involving the teacher and one or more students working at their desk.
[2] Oral examination is a longstanding component of secondary school examinations in Norway. Oral skills are assessed in Year 10 (age 15) in lower secondary schools and in Year 3 (age 18) in upper secondary schools.
[3] Acknowledgment tokens, the term we have chosen for this paper, are sometimes equated with "response tokens" (Hayashi & Yoon, 2009), "continuers" (Schegloff, 1982), "reactive tokens" (Xu, 2016) and "verbal feedback" (Stubbe, 1998).

student answer (Lee, 2007). In sequential terms, such evaluative use of acknowledgment tokens takes place in third position, or the Evaluation (or E) part of the well-known three-part IRE sequence (e.g., Macbeth, 2004; Mehan, 1979). Previous research has shown how teachers use acknowledgment tokens in the third position to provide an evaluative stance and also to move the question-answer sequences forwards (Lee, 2008). Acknowledgment tokens are thereby central to the kind of steering work that teachers so routinely do (Lee, 2007). But while a range of research has documented the systematic use of the third turn in educational contexts, we know less about the prosodic nuances in the way teachers display evaluative stance towards a student answer, and the extent to which students also recognise the teacher's evaluation based on prosody. There are also few studies in general that explore the prosodic variability of acknowledgment tokens.

In this paper we explore how teachers, from one third position acknowledgment token to the next, within extended IRE sequences, may modify the prosodic form of their acknowledgments according to how they treat the student answer. With this approach, we address how teachers use prosodic features to contextualise an answer in progress as "closer to", or "further from" an adequate answer. Generally, acknowledgment tokens can represent less explicit (and more subtle) evaluations than third position assessments such as "exactly", "correct", and herein lies also their interactional potential: acknowledgment tokens may further steer the answerability of a question without treating the answer so far as ("on the record") incorrect. We address how such subtle evaluation work might be relevant to evaluations both in the classroom and during oral exams. We provide further background on evaluative stance across institutional contexts (Section 1.1), the interactional work done with acknowledgment tokens (Section 1.2) and how these approaches apply to studies on teacher-student evaluations in oral exams and in the classroom (Section 1.3).

1.1. Evaluative stance in institutional contexts

Studies on evaluations in institutional contexts, such as interviews and courtroom proceedings, demonstrate how the presence or absence of assessment forms (e.g., "good") serve a specific interactional purpose. For example, interviewers actively avoid assessing a participant's answer to not influence its validity, restricting themselves to acknowledgment tokens including "yes" and "okay", or a repetition of the answer (Houtkoop-Steenstra, 1996). However, interviewers may also produce more explicit assessments, as one way of "doing being personal" with the interviewee (Houtkoop-Steenstra, 1997). Furthermore, assessments may help shaping the interactional environment for getting institutional tasks done. Antaki et al. (2000) found that interviewers, following an answer to a question, and an initial acknowledgment token ("right", "okay") would produce a high-grade assessment (e.g. "brilliant") ahead of moving into a next item on the interview agenda, thereby marking the completion of an institutional objective as successful. In courtroom proceedings, on the contrary, lawyers regularly omit third position assessments of witness responses to show that they already know the answer to the question (Drew & Heritage, 1992). Thus, there is a reflexive relationship between third position assessments (their absence/presence and form) and the institutional context in which they take place: institutional roles and contexts both shape, and are shaped by, the types of third position assessments used.

Third position assessments can take explicit forms, such as "wonderful", "well done"; however, they are not limited to lexical or syntactic content as they may be produced nonvocally or prosodically through phonetic variation of tokens such as "Ah:::" (Goodwin & Goodwin, 1987, p. 11), and also through the phonetic design of lexico-syntactic structures (Ogden, 2006). In the current paper we primarily focus on prosodic variability within uses of

the lexical token "ja" in Norwegian, that is, the focus is on prosodic form rather than lexico-syntactic form of third position evaluations.

1.2. The distinctive work of acknowledgment tokens

A range of conversation analytic research has demonstrated how conversationalists use acknowledgment tokens routinely and systematically to operate on ongoing talk. With the potential to be "noncommittal" to any form of evaluation or assessment – to align (Steensig, 2019, p. 4) but also to affiliate (Stivers, 2008) with ongoing talk - the variability of interactional uses of acknowledgment tokens are wide-ranging, and they remain far from being adequately understood (Gardner, 2001). To identify their differential roles and treatments in talk requires careful sequential analysis.

Gail Jefferson was amongst the first researchers of conversation to study the range of interactional functions represented by acknowledgment tokens in conversations. Her research was predominantly based on data in English (American and British). Through detailed sequential analyses she identified what she called the "distinctive work of [acknowledgment] tokens" (1984, p. 7), ranging from simply acknowledging, to projecting some level of affiliation and agreement on the one hand, and, on the other hand, subverting, through passive recipiency, the ongoing trajectory of talk. Jefferson (1984; 1993) hypothesised and tested the extent to which interactional functions of acknowledgment tokens were associated with their form. She showed how listeners regularly move from "mhm" to "yeah" when they intend to speak next (1993), suggesting that the form of acknowledgment tokens is associated with the potential to project transitions in sequence *and* speakership.

Most research on acknowledgment tokens has relied on lexical categories, investigating the extent to which various forms of acknowledgment tokens (e.g. "mhm", "mm", "uh-huh", "yeah") behave differently in interaction, without paying much attention to how prosodic features (forms) may contribute to functional distinctions. Jefferson (1984) hinted at the possibility of prosodic features doing distinctive work, observing that "although the token type is constant, the token shape changes" (p. 8). In one single case, Jefferson suggested a "yeah" with wider pitch contours projects engagement with the on-going topic, as opposed to flatly intoned "yah" [sic] which disengages with the topic (1993, p. 5), however, she never provided any systematic phonetic analysis of acknowledgment tokens in her research.

Gardner (2001), as part of a larger study on acknowledgment tokens, provided some prosodic analysis of acknowledgment tokens. For example, he described "mm" tokens generally as weaker forms of acknowledgment than "yeah"; however, depending on their pitch contour, the "mm" may display a continuer-type response (rising/flat intonation), as opposed to an affirming acknowledgment (rising-falling contour) and a somewhat disengaging acknowledgment (falling contour).

In Norwegian and Scandinavian languages, Svennevig (2001) and Lindström (1999) have researched "ja" as answers to questions/propositions in ongoing talk. In linguistic terms, "ja", like "yes/yeah" in English, is typically used to affirm a positive proposition (e.g., proposition: "the capitol of France is Paris" – affirmation: "ja"). In contrast, "nei" ("no" in English) affirms a negative *or* positive proposition (e.g., proposition: "the capitol of France is (not) London" – negation: "nei"), and "jo" (no direct translation in English) is used to negate a negative proposition (e.g., proposition: "the capitol of France isn't Paris" – negation: "jo") (see Svennevig, 2001). There are also hybrid versions of "ja" and "nei" in use, produced with a nasal onset of "ja" – "nja". Similar uses are reported in English (Jefferson, 1978), as a way of ambiguating or weakening an affirmation. Svennevig (2001) shows how "ja" not only occurs

as stand-alone utterances but to initiate a more elaborate response to wh-questions. His research shows how "ja" contributes to regulate the interactions as they project a delayed answer, a multi-unit response or a need for more processing. Lindström (1999) shows how elongated "ja" (and its equivalents "a" and what she labels curled "ja" pronounced with slight rise in pitch toward the end of the syllable) projects a non-aligning response. While Lindström (1999) investigated how prosody/phonetics of a specific type of "ja" contributes to the action it performs, none of these studies have looked at the acknowledgement tokens in third position in educational contexts – to which we turn next.

1.3. The third turn and the role of prosody in evaluation sequences in the classroom

The third turn in classroom interaction is generally conceptualised as the Evaluation part in the three-turn sequence, Initiation – Response – Evaluation (IRE) (Mehan, 1979). However, as research has shown, the third turn offers more local and immediate contingencies than the generic notions of evaluation and feedback imply (e.g. Macbeth 2003; Lee, 2007). For example, teachers' third turns respond in different ways to the correctness, adequacy and relevance of a student's response/second turn. The teachers' rich range of responses in third position does important pedagogical and interactional work as they show the students what the teacher was setting out to achieve, thus building interpretive resources for the students which makes the students able to participate effectively in classroom interactions (Lee, 2008; Macbeth, 2011; Margutti & Drew 2014).

Extract 1 is an illustrative example of teachers provide such "steering work" (Lee, 2007), operating on the student's answer to their question. "TEA" stands for "teacher", "S1" refers to "student 1" and "S2" to "student 2".

```
(1) DT_N1_4b, 0:50

1    TEA:    Hvorfor er det bare de to tingene som står,          og
             Why is it       only those two things that is written, and

2            dett:e er størst.
             this is largest

3    S1:     Det er fordi [det- de:t er: sånn-      ]
             It's because [it- it's like-          ]

4    S2:                  [den største er (   ) vik]tig,
                          [the largest is (   ) imp]ortant

5    TEA:->  [mm,     ]
             [mm,     ]

6    S1:     [det er jo] sånn at de skal se at det er a- (0.3) når
             [it's     ] that way so they will see that it's- (0.3) when

7            de for eksempel blar forbi en avi:s eller noe sånt=å ÅÅH
             they for example turn a page in a newspaper or something=oh OH

8            iphone seks jo kommer jo ut?
             iphone six is coming

9            (0.3)
             (0.3)

10   TEA:->  ↑JA.
             ↑YES.
```

```
11              (0.3)
                (0.3)

12     TEA:     Helt riktig?
                Correct

13              (0.5)
                (0.5)

14     TEA:     Når du blar forbi denne reklamen så skal du ikke være
                When you turn past this ad then you will not be

15              i tvi:l om hva slags mobil dette er?
                in doubt what kind of mobile this is
```

Both acknowledgment tokens, "mm" (line 5) and "↑JA" (line 10) are produced in third position, i.e. as successive E turns in an extended IRE sequence. However, the difference lies in how they are used and treated in the ensuing interaction. As the teacher provides an acknowledgment "mm," in line 5 (a "continuer"; cf. Schegloff, 1982), S1 re-initiates his answer in line 6. In comparison, following the teacher's "↑JA." in line 10, the teacher proceeds with an explicit affirmation in line 12 and an account in lines 14-15. Here, both teacher and students treat the teacher's acknowledgement "JA" as an opportunity to make the positive evaluation more explicit: the teacher by providing the explicit evaluation, and the students by providing no further attempt to progress their answer. The question remains whether and how lexical and prosodic design features of the "mm" versus "↑JA." may be systematically tied to such a differential conversational outcome.

Other conversation analytic studies have shown how teachers' evaluation turns are used to indicate whether the student's answer to teachers' question is (for all practical purposes) correct (e.g., Hellerman 2003; Margutti & Drew 2014). Hellerman (2003) has shown how absence of a teachers' third position response is treated as negative assessment, making students offer an alternative answer. A teacher's repetition of students' answers, however, is sometimes treated as a positive confirmation of the students' answer: Hellerman (2003) suggests that, depending on prosodic form, the third position response may index either a positive evaluation and the end of a sequence (with features including matching pitch onset/peak with student and falling pitch contour), or an evaluation that indicates an incomplete answer and thereby leads to an extension of the sequence (with features including non-matching pitch onset/peak and final rising pitch contour). Based on this, and other research regarding the relevance of prosodic features to differentiate types of sequence expansion (e.g., Walker & Benjamin, 2017), there is already some evidence of systematic ties between evaluative moves and prosodic form. Margutti and Drew (2014), also focusing on positive evaluations in the classroom, show how teachers through five different formats of their third position response provide the students with various "interpretive resources for understanding more broadly the type of activity being enacted and teachers' pedagogic goals" (p. 447). Margutti and Drew (2014) found some version of lexical repetition to be the most frequently occurring in classroom teaching, but also noted that third position particles such as "mm", with no precise lexical meaning, nonetheless endorse prior answers, and that prosodic features help to disambiguate such an endorsement. That is, when treating an answer as "correct", "mm"- type particles were associated with marked high onset pitch and rising-falling intonation, and louder than normal for the speaker. These are features similar to what we observed for the "JA" in Extract 1, and also to what Gardner

describes as "heightened involvement" associated with acknowledgment tokens (Gardner, 1997, p. 132).

One may use a range of different terms to account for the target that the teacher is steering towards, including "correctness", "completeness" and "adequacy". In this paper we use the term "adequacy" to describe the range of cases we have to hand, specifically in terms of how prosody systematically foreshadows the evaluative stance of the next turn, as "more", or "less", adequate. This is in line with Macbeth (2003), who suggests that a third position evaluation does not in general remark on the correctness per se of the student's answer, "but rather on its adequacy as a reply, for the practical, instructional, discursive purposes at hand" (2003, p. 263). As Macbeth (2003) points out, "students can *hear* the adequacy of replies *in* the production of teachers' third turns, and thus can know an adequate or failed reply without themselves knowing what a correct reply would be" (Macbeth 2003, p. 260). In this view, the evaluation process is less about distinguishing correct/incorrect answers than giving students some way of accessing the adequacy of the answer so far. One might also conceptualize this evaluation in terms of "completeness"; however, our view is that a measure of "completeness" assumes the student is on target for a complete answer, while the concept of adequacy also opens for the answer so far not being on target. Although the students can hear that something is not quite right in their answer (based on the teacher's acknowledgment token), it may be unclear whether they are indeed on the right path.

2. Data and Methods

The dataset builds on a collection of video-recorded teacher student interactions in six Norwegian secondary schools. It contains ten hours of "desk talk", that is, interactions in which the teacher facilitates discussion with individual or groups of students as they work on tasks at their desks, and twenty hours of oral examinations. The collection of desk talk is extracted from lessons involving teacher-fronted instruction; however, our focus is on the desk talk interactions excluding teacher-fronted classroom interaction. Desk talk is an integral part of classroom practice in Norwegian primary and secondary schools. According to a study on teacher practice in Norwegian classrooms, Klette (2003) reports that approximately a third (37%) of classroom teaching time is spent on individual and/or group work. However, they do not provide further details on how these individual/group interactions unfold. Unlike desk talk/group work in the classrooms, the oral exams are high stake tests, where the students (candidates) receive a grade recorded on the candidates' final school diploma, and these grades have direct consequences for students' access to further education and career possibilities. We conducted our analysis on both data sets to consider the relevance of high and lows stakes in how prosody is monitored in extended IRE sequences. All informants signed a letter of consent, and the project is registered and approved by the Norwegian Centre for Research Data (NSD).

We use conversation analysis (CA) to analyse the data, a methodology used for in-depth analyses of human social interactions. CA discovers how participants orient to one another in turns at talk, with a central focus on "how sequences of actions are generated" (Hutchby & Wooffitt (2008, p. 12). CA analyses are based on naturally occurring interaction; they are inductively driven, and the analysts approach data with an emic approach, analysing the on-going interaction from a participant's perspective (ten Have, 2007, p. 35). Identifying the prosodic function of the teachers' third turn acknowledgment tokens requires a close inspection of subsequent responses and orientations by the interlocutors. For example, to identify specific evaluative moves, such as whether a teacher acknowledgment treats an answer as "correct" or "on its way", we examine the consequences of the evaluation, that is, how the sequence progresses. In this way, based on the participants' own demonstrable

orientations towards interactional events, we can start comparing the way acknowledgment tokens are used and treated across similar question-answer-evaluation sequences. Then we explore how such interactional distinctions may be tied to prosodic, lexical and other linguistic features (cf. Walker, 2014). Note that the comparison "more" and "less" is based on comparisons *within* evaluation sequences where teachers pursue an adequate answer to their question, and the evidence for how teachers and students orient to such differentiation.

All data are transcribed according to Jefferson's (2004) system for conversation analytic research. From the data, we collected all instances of third position acknowledgement tokens, produced by the teacher, following a student's answer (second position) to the teacher's question (first position). Our data collection is schematically represented in Table 1, which shows that each evaluation turn (third position) may be followed by a new series of first to third position turns pursuing the original question (unless sequence is treated as complete).

Sequence position	Action
1	Teacher asks a question
2	Student answers
3	**Teacher evaluates student answer** with acknowledgment token "ja"
4	Sequence closing, expansion or reformulation (teacher or student): potential new 1st /2nd / 3rd sequence position

Table 1. Schematic representation of evaluation sequence.

To keep sequential, lexical and phonetic-segmental factors stable across cases, our collection is based on third position "ja" responses, that follow one or more student's answer to a subject-related problem/question raised by the teacher. The collection excludes sequences based on "yes/no" questions and confirmation requests. We also excluded cases with third position acknowledgment tokens other than "ja", such as "mm". However, we do include cases of neighbouring lexical-phonetic forms such as "nja" – a doubtful confirmation (see also Jefferson, 1978); and "jo" – negating a negative formulation (see also Svennevig, 2001).

We describe and analyse the phonetic quality regarding pitch contour, pitch onset and offset in the "ja"s. We also measured durations (in units of seconds): pitch contours are produced over time, and the duration of an acknowledgment is part of its prosodic quality, as elsewhere in spoken conduct (Walker, 2013). All pitch traces are presented with logarithmic values, corresponding to human hearing (e.g. Walker, 2017). Pitch features were normalised with reference to the speaker's overall pitch range. For example, in Figure 1, the top line and the bottom lines represent the highest and lowest pitch values in this speaker's pitch range. In Figure 1 we can see that the pitch contour "↑JA." is characterised by high onset pitch. This movement represents pitch contour, and plays an important role, along with voice quality and loudness, of adding prosodic features to a word or sentence.

According to conventions, we present pitch contours in Hertz (Hz – representing frequency of vocal fold vibrations) on a logarithmic scale, as this better reflects the auditory perception

of frequency by the human ear than a linear scale (Walker, 2017). The logarithmic scaling is evident in Figure 1 by the wider gap between 150-300Hz, compared to the distance 300-450Hz on the y axis. While single frequency (pitch) values are given in Hz, we refer to pitch spans in semitones (ST). Semitones also matches the nonlinear quality of the human auditory system and is often used to express differences between two frequencies (Walker, 2017). In Figure 1, we see the difference in semitones (ST) from the highest to the lowest point in the pitch contour, is 3.5 ST (equivalent to 104Hz). The advantage of referring to pitch difference in terms of semitones is that it represents difference as perceived. We have used software Praat to generate the pitch contours and have utilized the smoothing function to remove micro-prosodic frequency perturbations (see Reichel & Winkelmann, 2010). Micro-prosodic features are caused by the production of individual speech sounds, and smoothing is regularly done in intonation research to highlight the overall, macrolevel pitch contours which we also focus on in this paper.
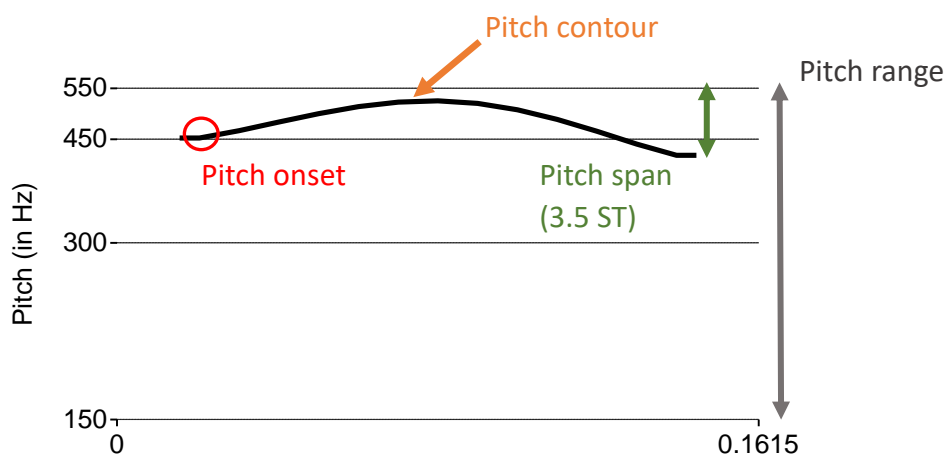

Figure 1. Pitch contour a "ja" in Hz (y axis) across time (in seconds, x axis). The visualisation shows the definition of pitch onset (red circle; pitch value of the beginning of the word), pitch span (green arrow; the difference between the highest and lowest pitch value of a word, in semitones (ST)), and pitch range (grey arrow; the speaker's entire range within which they produce normal speech).

3. Analysis

Our analysis shows, first, how teachers treat answers unequally with regards to how adequately the answer fits the question (section 3.1). In section 3.1 we focus primarily on the sequential features, based on a core set of examples; in section 3.2 we use the same examples to show how prosodic features tie with the sequential distinctions. In section 3.3 we demonstrate how the identified ties between prosodic features and evaluation are treated as consequential by students. Finally, in section 3.4, we shed further light on our findings based on an example where an oral examiner uses prosody to remedy any indication that they had treated the student's answer so far as inadequate.

3.1. Teachers and students treating answers as "more" and "less" adequate

Extract 2 shows how the teacher, from one evaluation slot (lines 8-9) to the next (lines 12-13), moves from treating the student answer as "less" adequate to "more" adequate. The

evaluations follow a question (lines 1 and 4) about an Iphone advert[4], specifically what type of audience it targets.

```
(2) DT_N1_1a, 0:30

1  TEA:     Og så må du forklare=Ja men da- hv:ilke mennesker.
            And then you must explain=Yes but th- which people

2                   (0.3)

3  S1:      .ptk e:[:  ]
            .ptk uh[:  ]

4  TEA:           [Det] er ikke alle den reklamen appellerer til?
                   The advert doesn't appeal to everyone

5                   (1.1)

6  S1:      Liksom (0.3) folk som liker >Iphone<?
            Like    (0.3) people who like Iphone

7                   (0.8)

8  TEA: ->  Ja:↑: det kan være andre ting også,=Når dere ser på den:
            Ye:↑:s there could be other things too=When you look at that:

9           det bildet der,
            that picture there

10                  (1.1)

11 S1:      Folk som vil ha større telefon, ((ser på lærer))
            People who want a bigger phone ((gazes at teacher))

12 TEA: ->  Ja, nå begynner vi:::e å komme inn på det.=.hhh for de
            Yes, now we::: start getting there=.hhh because they

13          gjør veldig nummer ut av at den er stor.
            make a big thing of it being large
```

In lines 1 and 4 the teacher reformulates her question regarding who the target(s) of the advert is: "The advert doesn't appeal to everyone" (line 4) alludes to the understanding that an advert should be targeting someone specific as opposed to everyone. S1 attempts to target a specific audience in his answer in line 6 ("people who like Iphone"), following which the teacher prefaces her evaluation with an acknowledgment token "Ja:↑:". Next, in lines 8-9, the teacher suggests that the answer is not quite what she was going for ("there could be other things too"), without treating the answer as incorrect. S1 then makes another attempt with "people who want a bigger phone" (line 11), following which the teacher, in comparison with her previous evaluation, suggests that the answer is closer to what she was going for: "now we::: start getting there" and her own account "because they make a big thing of it being large" (line 13).

A central part of the work the teacher does here, is to turn the students' attention to the visual and textual resources used in the advert. With the utterance: "When you look at that: that picture there" (lines 8-9) she draws the student's attention to the iPhone advert in front

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[4] The advert shows the image of an Iphone and the words "Iphone 6: bigger than bigger".

of them, implicitly telling the students to base their answer on what they can observe. The teacher does this as part of a multi-unit turn, preceded by a more direct evaluation of the student's answer ("Ye:↑:s there could be other things too", line 8). Together, these two turn-constructional units (TCUs) convey to the student that although the answer is not wrong, it could be more targeted in the context of the task provided.

Following the student's next attempt, "People who want a bigger phone" (line 11, where the student also moves their gaze towards the teacher as their turn comes to an end), the teacher indicates that the student is headed in the right direction: implicitly, the student has now used information available in the advert, based on the size of the phone advertised, which the teacher also confirms with "Ja, [….] because they make a big thing of it being large" (lines 12-13). Thus, evidently, the teacher treats the second answer (line 11) as more adequate than the first (line 6).

In Extract 3, taken from another school class, the topic is literary devices, and the teacher asks what these students think dramatic present (or historic present) is in lines 1-2. We have split this extract into two parts, 3a and 3b.

```
(3a) DT_Ø1_1d, 1:32
1    TEA:    Ut fra den forklaringen da.=Hva tro:r
             Based on that explanation=What do you

2            dere dramatisk presens er,
             think dramatic present is,

3                   (1.5)

4    S1:     Noen fortell:er en:::=
             Someone tell:s a:::=

5    S2:     =Å fremkalle følelser eller:
             =To evoke feelings or:

6            tank[er hos]: lesere::=
             though[ts for:] readers::=

7    TEA:->  [Ja,   ]
             [Yes   ]

8    TEA:    =Men hva er presens.
             =But what is present
```

S1 is first to initiate an answer in line 4: "Someone tell:s a:::", latched into S2's independent answer "To evoke feelings or: thoughts for: readers::" (lines 5-6). In line 7, the teacher acknowledges the students' answers so far, and pursues her initial inquiry with a follow-up question "But what is present [tense]" (line 7), disposing of "dramatic" and targeting the definition of present tense. By reiterating her initial question, the teacher shows that the students' answer was not quite what she was going for, and she also highlights the most relevant part of the question to further facilitate the kind of reasoning relevant to her question.

It turns out that, in this case, while the students focus on the concept dramatic present as a literary resource for engaging the reader, the teacher is evidently more focussed on the grammatical definition of the term, i.e. its form rather than its literary function. The teacher

acknowledges the student answers at several points (lines 7 in Extract 3a; lines 13, 18 and 20 in Extract 3b) without fully accepting their responses as where she was heading.

```
(3b) DT_Ø1_1d, 1:32

9               (0.3)

10    S3:    [Dem vil at vi] skal: eh- (0.3)
             [They want us ] to:   uh- (0.3)

11    S2:    [(            )]

12    S3:    responde:re¿ På det den fortell[er.
             respon:d     To what it tell[s

13    TEA:                               [Mm:¿
                                         [Mm

14               (0.6)

15    S4:    Det skje:r (noe) med oss, [eller (      )    ]
             Something happen:s to us  [or     (      )    ]

16    S3:                             [Liksom vi skal få]
                                      [Like we're supposed to get]

17    S3:    [fø:lelsen  ] av det som skjer,
             [the feeling] of what's happening

18    TEA:   [Mm:,       ]
             [Mm         ]

19          (.)

20    TEA:->.ptk (0.9) ja?
             .ptk (0.9) yes

21          (0.4)

22    TEA:   Men hva er da forskjellen hvis n-
             But what is then the difference it s-

23          hvis- vi f- (.) sier at: (.) i en
             if-   we f- (.) say that: (.) in a

24          tekst dette er dramatisk presens,
             text this is dramatic present

25          (0.2) Hvordan skiller det seg ut
             (0.2) How does that differ

26          fra den andre teksten?
             from the other text
```

Following the teacher's acknowledgment token in line 20, the teacher produces a less straightforward next move (lines 22-26) compared to the follow-up question in line 8 (Extract 3a). It is evident that the students have not yet arrived at an answer matching the teacher's

intentions with the question, and the teacher strives to reformulate the very basis for the question: the teacher's elaboration in lines 22-26 confirms that she steers the students towards defining the grammatical feature which determines the literary function of dramatic present tense. By reformulating her question, the teacher takes a further step back, treating the emerging student answer as no closer, indeed less close, to an adequate answer than before.

Extracts 2 and 3 represent two cases where the teacher treats student answers as neither correct nor incorrect, but with varying degrees of adequacy. In both cases, the explicit teacher evaluations are prefaced by acknowledgment token "ja" (lines 8 and 12 in Extracts 2; lines 7 and 20 in Extract 3), and as we proceed with our analyses we explore how the prosodic variability of such acknowledgment tokens are tied to the varying evaluative stance evident in the data. For example, the reader might observe that the two target acknowledgment tokens "ja" in Extract 2, lines 8 and 12, are transcribed differently: The transcription of "Ja:↑:" (line 8) indicates that it is more prolonged, with more pitch movement, than "Ja," in line 12. The question remains whether this prosodic variability is systematic in terms of the kinds of evaluative treatments teachers project. This is the focus in the next section.

3.2. Prosodic features differentiating "more" and "less" adequate answers

In this section we demonstrate that acknowledgment tokens with wider pitch spans are associated with treating student answer as less straightforward, or less adequate, compared to previous or subsequent evaluations with narrow pitch spans, and that teachers use this variability systematically in order to differentiate "more", from "less" adequate answers within individual evaluation sequences.

Starting with Extract 3 (represented in Figure 3), the second acknowledgment token, "ja?" (line 20, left) starts 2 semitones lower than first acknowledgment token "Ja," (line 7, right), and ends 5 semitones higher. In terms of pitch span then, the second acknowledgment shows a wider pitch span (15.5 ST) compared to the first acknowledgment token (6.0 ST). The differences in pitch span are illustrated in Figure 2 (bottom), with reference to the relevant lines/acknowledgment token in Extract 3 (top).

Wider pitch span / treating answer as less adequate	Narrower pitch span / treating answer as more adequate
| ```
16 S3:  Like we're supposed to get
17      [the feeling] of what's happening
18 TEA: [Mm:,       ]
19         (.)
20 TEA: .ptk (0.9) ja?
21         (0.4)
22 TEA: But what is then the difference
        it s-
``` | ```
5  S2:  To evoke feelings or:
6       though[ts for:] readers::=
7  TEA:        [Ja,    ]
8  TEA: =But what is present tense
``` |
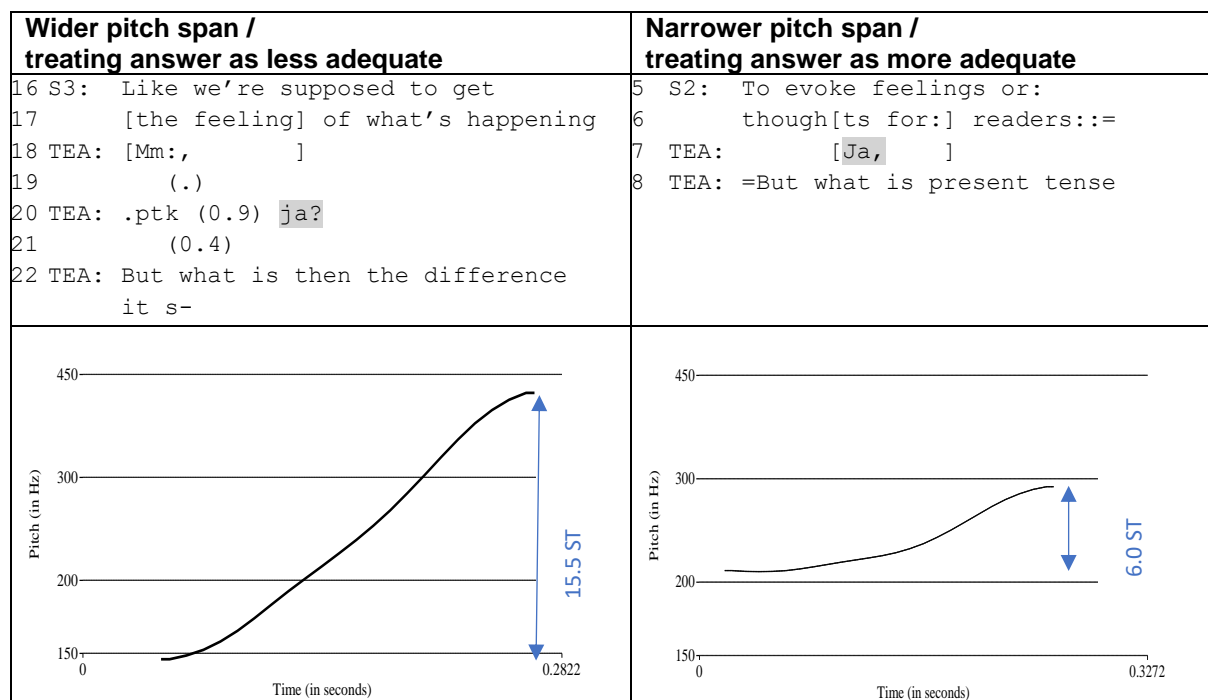
Figure 2. Pitch contour for "ja?" in line 20 (left) and "Ja," in line 7 (right) of Extract 3. Vertical arrows show pitch span (in semitones; ST). Durations of onset to offset of each token is given on the x axis.

In a similar way, the acknowledgment token with the widest pitch span in Extract 2 (line 8 – here represented in Figure 4) was associated with treating the answer as less adequate than did the acknowledgment in line 12. The pitch span of the first acknowledgment token was 16.0 ST compared to 12.5 ST for the second acknowledgment tokens. Figure 3 visualises the target acknowledgment tokens and their pitch spans.
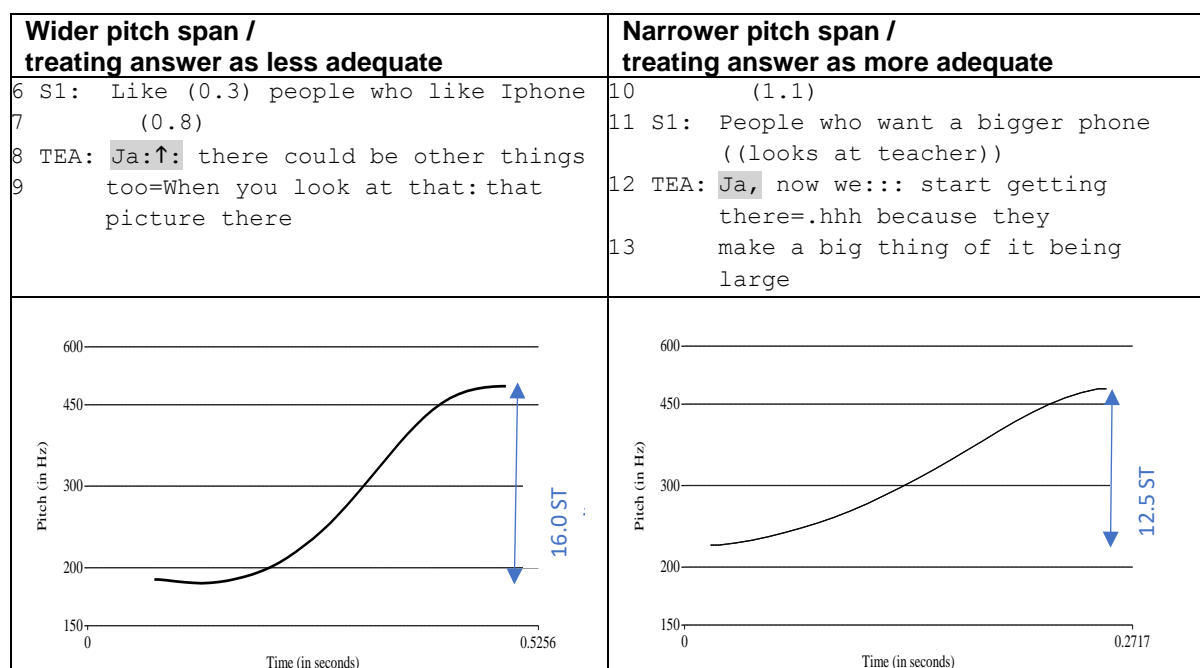
Wider pitch span / treating answer as less adequate	Narrower pitch span / treating answer as more adequate

6 S1: Like (0.3) people who like Iphone
7   (0.8)
8 TEA: Ja:↑: there could be other things
9   too=When you look at that: that
       picture there
	10 (1.1)
	11 S1: People who want a bigger phone
	       ((looks at teacher))
	12 TEA: Ja, now we::: start getting
	       there=.hhh because they
	13 make a big thing of it being
	       large

Figure 3. Pitch contour for "Ja:↑:" in line 8 (left) and "Ja," in line 12 (right) from Extract 2. Vertical arrows show pitch span (in semitones; ST). Durations of onset to offset of each token is given on the x axis.

Pitch span appears not to be the only relevant feature associated with withholding a positive evaluation. In Extract 2 (Figure 3), the first acknowledgment "Ja:↑:" in line 8 (left) also has longer duration than the second acknowledgment token in line 12 (right). The prolonged vowels might here add to the sense of delay/hesitation in this example, associated with the less adequate answer treatment. In Extract 3 (Figure 2) the delayed onset of the second acknowledgment in line 20 (left) might, along with the wider pitch span, also add to a sense of hesitation, or trouble. Overall, however, the width of the pitch contour (i.e, the pitch span) is routinely associated with distinguishing "more" from "less" adequate answers in the ensuing evaluation. These prosodic markers are used prior to any explicit evaluation and thereby would make available any such treatment to the students. In section 3.3 we present further evidence that students themselves orient to prosodic features of the teachers' third position acknowledgment tokens in this way.

3.3. Students treating teachers' acknowledgment tokens as evaluative

In Extract 4, returning to the advertisements in another desk talk encounter, the teacher asks "What is Apple in a away known for" (line 1), as a way of getting at the possible thinking behind the Iphone ad. The student's first attempt, "Adverts" (line 3), is not treated as

adequate in this regard, with the teacher responding with a lexically less ambivalent form of acknowledgment, "Nja" (line 5) – a hybrid version of "yes" and "no" in Norwegian.

```
(4) DT_N1_1a

1   TEA:      Hva er det Apple på en måte er kjent for?
              What is Apple in a away known for

2                   (0.7)

3   S1:       Reklame,
              Adverts

4                   (0.4)

5   TEA: ->   Nja:? De er    [veldig-]
              Yeah: They are [very-   ]

6   S1:                      [(De-)  ]  (.) l:age:r (1.2)
                             [(They-) ] (.) make    (1.2)

7             .tk å e:: m: (2.0) (er det) e: e lager
              .tk to uh::m: (2.0) (is it) uh: uh make

8             produkter som blir bedre og bedre,
              products that get better and better

9   TEA: ->   Ja:¿ Men de er også veldig kjent for design.
              Yes¿ But they are also very well known for their design
```

Following the teacher's "Nja:?" (line 5), in which the vowel is slightly prolonged, the teacher moves into a next TCU, while the student initiates a second attempt in overlap with the teacher. Thus, the student treats the teacher's "Nja:?" as marking out his answer as inadequate. Evidently, nothing the teacher does in between his first answer (line 3) and the second (line 6) alters this understanding, and we can safely argue that the "Nja:?" is treated, by both teacher and student, as indicating inadequacy of the answer. At the next third position, the teacher produces a positively formatted "Ja:¿" (line 9), which, in addition to being 0.2 seconds shorter in duration, has a lower pitch offset and overall narrower pitch span (9.5 ST) compared to the former "Nja:?" (11.5 ST) (see Figure 4). Again, the wider pitch span acknowledgment is associated with treating the answer in line 3 as "less" adequate compared to the "more" adequate answer in lines 6-8. Though not treating the student's answer as altogether adequate in line 9, the teacher moves on to add to the student's perspective, not treating the answer as wrong but rather as inadequate. In contrast, in line 5 the teacher treats the answer as somewhat incorrect, as well as inadequate.
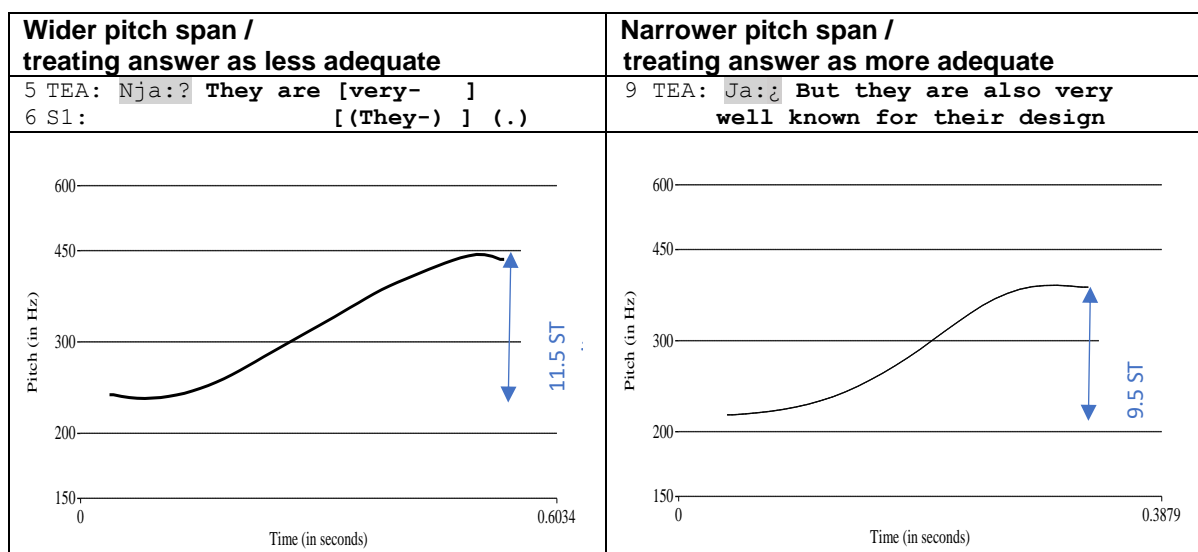
Wider pitch span / treating answer as less adequate	Narrower pitch span / treating answer as more adequate
5 TEA: Nja:? **They are [very-]** 6 S1: **[(They-)] (.)**	9 TEA: Ja:¿ **But they are also very** **well known for their design**

Figure 4. Pitch contour for "Nja:?" in line 5 (left) and "↑Ja:," in line 9 (right) in Extract 4. Vertical arrows show pitch span (in semitones; ST). Durations of onset to offset of each token is given on the x axis.

In Extract 4, the timing of the student's second answer (lines 6-8) relative to the teacher's "nja" (line 5) provides evidence that students orient specifically to the third position acknowledgment tokens, i.e., not awaiting more explicit teacher evaluations before proceeding to pursue an adequate answer. While "nja" represents a lexical hybrid of "yes" and "no", thereby lexically (as well as prosodically) embodying a sense of "not quite yes", we also have some evidence that students orient to third position "ja"s ("yeah/yes") in a similar way, relying on prosody. Extract 5 is a case in point. Here, the teacher targets the looks of the actor/model in a milk advert and asks who the primary audience might be (lines 1-2), while suggesting that one (or more) categories of people might find the male actor attractive. Extract 5 also shows how teachers can use prosodic features to modify, or withdraw, any interpretation that they treated an answer as inadequate.

(5) DT_N1_2a, 0:20

```
1   TEA:    Hvem er de:t som: eh: kan (te) se
            Who is it: who:   uh: could look

2           på han og tenke at dette så bra ut?
            at him and think that this looks good

3               (0.8)

4   S1:     Da:mer,
            Ladies

5   TEA: -> Ja:?
            Yes

6               (0.7)

7   S2:     eh heh [heh heh [.HH
            Uh huh [huh huh [.HH
```

```
8   S3:              [hm hm
                     [hm hm

9   S4:              [hm hm
                     [hm hm

10  S1:              [Det er ↑sant da:.
                     [It's true though:

11  TEA: ->  Ja¿=↑Men jeg er helt enig ↑jeg,
                     Yes¿ But I completely agree

12               (.)

13  TEA:     ↑Jeg tenker at de:::t kanskje:::::
                     I think that i:::t maybe:::::

14          spiller eh::: litt over mot
                     plays uh::: a little with

15          kvinnelige forbrukere,
                     female consumers
```

Following a 0.8 second gap (line 3), S1 answers "Ladies" (line 04), to which the teacher immediately responds "Ja:?" in line 5. The acknowledgment token and following gap of 0.7 seconds (line 6) leave open the possibility of more (student) answer or an explicit (teacher) evaluation. Instead, after the gap the three other students start laughing (lines 7-9), to which S1 responds by reasserting the validity of her answer: "It's true though" (line 10). In line 11 the teacher affirms her acceptance of S1's response with "But I completely agree", followed by a more considered reformulation, targeting female consumers. The teacher does so in much more tentative terms, with "maybe:::::" and "a little" (lines 13-14), thereby giving it a more delicate wrapping, rather than affirming 'ladies' (or 'women' as an alternative translation) as the appropriate category or definition.

In phonetic terms, the first acknowledgment "Ja:?" (line 5) has a wider pitch span than the second one "Ja¿" (line 11): the pitch span is 15.5 ST in the first one and 12.0 ST in the second acknowledgment. We argue that the wider pitch span can be a resource for inviting joint interpretation/evaluation from the other group members as well. It displays a kind of questioning acceptance which "ja"s with narrower pitch spans do not. The second "Ja¿" (line 11), with narrower pitch contour, is followed by a more affirmative response "But I completely agree". By modifying their pitch contour in this way, the teacher may modify, or withdraw, any interpretation that they treated an answer as inadequate. In our final example, presented in Section 3.4, we will see how examiners may use pitch contours actively, along the lines presented so far, in oral exams, where more is at stake for students to not get the answers wrong.
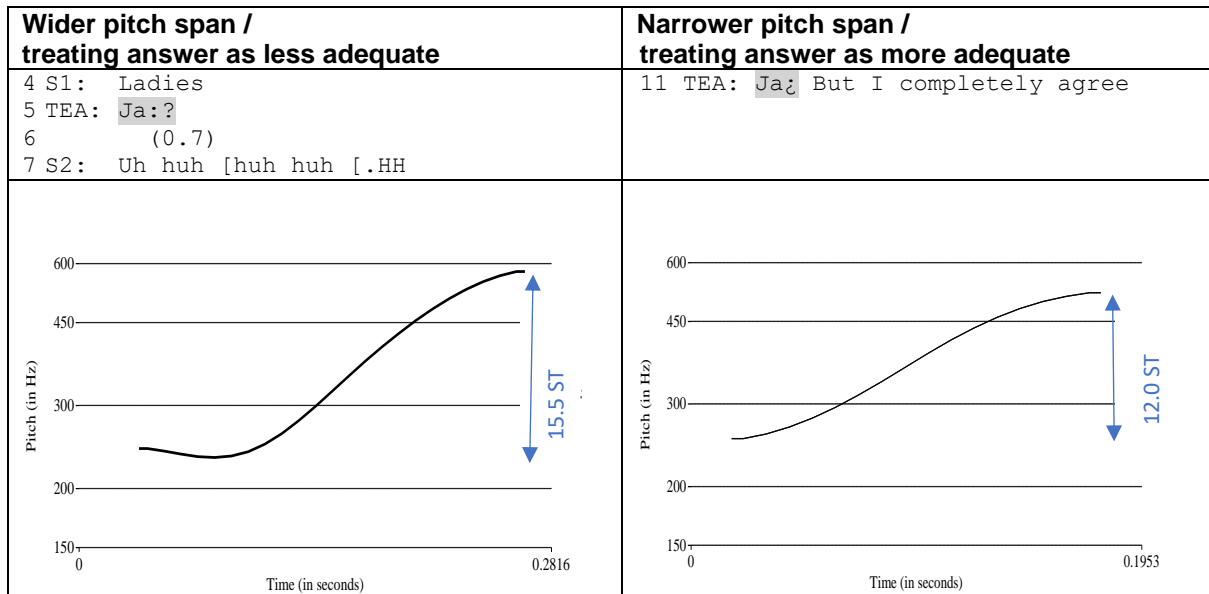
Wider pitch span / treating answer as less adequate	Narrower pitch span / treating answer as more adequate
4 S1: Ladies 5 TEA: Ja:? 6 (0.7) 7 S2: Uh huh [huh huh [.HH	11 TEA: Ja¿ But I completely agree

Figure 5. Pitch contour for "Ja:?" in line 5 (left) and "Ja¿" in line 11 (right) in Extract 5. Vertical arrows show pitch span (in semitones; ST). Durations of onset to offset of each token is given on the x axis.

3.4 Manipulating pitch contour to move from "less" to "more" adequate answer treatment

Whereas examples so far represent desk talk evaluations, the final example is taken from an oral exam. In Extract 6, the teacher (the examiner, EX), asks the student (the candidate, C) about the neo-romantic authors, including the Norwegian author Knut Hamsun. The candidate has not shown clear signs of readiness to elaborate on the topic, and we see the examiner pursuing a response, and narrowing down the scope of her questioning, from "do you remember something about that" (line 5), to "what was Knut Hamsun concerned about" (lines 7-8), and "if you think a little like…" (line 10), before the candidate initiates an answer. However, our focus here is on the examiner's treatment of the candidate's answer as it eventually materialises in line 11 onwards.

```
(6) TT_V1_E1, 29:04
01   EX:    Du var innom nyromantikk↑en.
            You mentioned the neo-romantic era.

02               (0.4)

03   C:     °°Mm°°
            °°Mm°°

04               (0.5)

05   EX:    (k-) Husker du noe om:: om det?
            (c-) Do you remember something abou::t about that
```

```
06                  (.)

07   EX:     <Hva var det (0.6) ny::romantikken: hva- hva er det Knut
             What was it (0.6) the neo-romantics: what- what was Knut

08           Hamsun var opptatt ↑av,
             Hamsun was concerned about

09                  (0.8) / ((K looks at her laptop screen))

10   EX:     Hvis du tenker l[itt °sånn°]
             If you think a [little like]

11   C:                     [Han  var ] vel opptatt av    å: .hhh få
                            [He was   ] PART (keen/concerned) to:
                                                            .hhh bring

12           fram: (0.8) de:t d- (0.4) det vikt::ige d- (0.5) de
             forward: (0.8) the: i- (0.4) the impor::tant th- (0.5) the

13           viktige temaene eller ↑no' da.
             important topics or something

14   EX: -> ↓Ja?=
             ↓Yes?=

15   C:      =Jeg husker ikke he:lt,
             =I don't quite remember

16   EX: -> ↑Jo? Men det er helt riktig det,
             Yes? But that is (completely) correct

17   C:      °°Mm°°=
             °°Mm°°=

18   EX:     =Og hvis du ser for de::g .mhh ser for deg Victoria,
             =And if you imagine      .mhh imagine Victoria

19   C:      °Mhm°,
             °Mhm°,

20                  (1.4) / ((EX moves gaze away from C))

21   EX:     Hva var det som var viktig for Ham:sun å få: frem,=Hva
             What was it that was important for Ham:sun to bring forward

22           var det Victor- hva var det Victoria var
             was it Victor- what was it Victoria was

23           veldig opptatt av,
             very concerned about
```

The student answer in lines 11-13 provides a generic definition of "important topics", with no further specification (e.g. poverty, gender dynamics, etc.) – a specification which could risk turning out to be wrong with reference to the examiner's question. In producing this answer, the student hesitates on multiple occasions and recycles "important" before ending the turn with a sense that the answer could also be made in a different way with "or something" (line 13). The examiner's acknowledgment in line 14, "↓Ja?", does not make explicit a negative

evaluation, however the candidate herself treats her own answer as inadequate in line 15, "I don't quite remember". Then, with no delay, the examiner counters the candidate's negative self-evaluation with "Jo", followed by an assertion to encourage the student to continue – "But that is (completely) correct" (line 16). Thus, the teacher treats the candidate's answer as not only adequate, but more than adequate.

Similar to previous examples of acknowledgment tokens prefacing treatments of less adequate answers, the acknowledgment token "↓Ja?" in line 14 is characterised by a relatively wide pitch span compared to the second "↑Jo?" (see Figure 6). The student may or may not pick up on pitch contour as a signal of inadequacy in line 15; at least she does not treat the teacher's acknowledgment as changing the candidate's own sense of inadequacy in her answer. Our key point here, however, is that the examiner moves on to remove any such sense of negative evaluation. In contrast to the first acknowledgment, the examiner's "↑Jo?" (line 16) is characterised by a high-pitch onset and a narrow pitch span. In accordance with previous cases, and supported by the teacher's own subsequent account, such narrow pitch span is associated with treating the answer as more adequate than any previous third turn acknowledgment might have been heard as doing. Thus, the examiner seems to use prosodic features, specifically pitch span (perhaps in addition to a high pitch onset) as part of remedying any sense of wrong in the candidate's process of answering, providing the candidate with the encouragement that she needs. Indeed, the examiner moves into the next turn (line 18) with an "and"-preface (as opposed to "but"), thereby seemingly treating the candidate's answering so far as progressively bringing the line of questions forwards. However, the teacher proceeds by reformulating her initial question about Hamsun's core concerns with his writing, this time reframed (as a matter of self-repair) to capture these concerns from the point of view of the main character in his novel "Victoria" (lines 21-23). Evidently then, the student has not yet answered the question, and the teacher manages to pursue an adequate answer while avoiding any "on the record" treatment of the answer so far as inadequate – and she used prosodic (and lexical) features to do so.
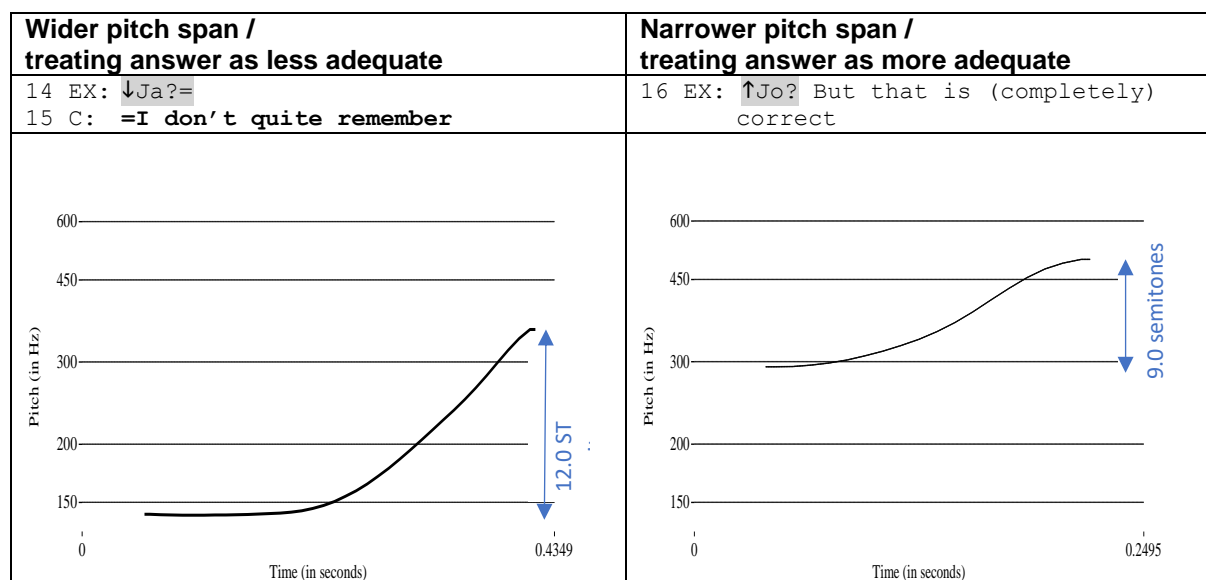

Figure 6. Pitch contour for "↓Ja?" in line 14 (left) and "↑Jo? in line 16 (right) in Extract 6. Vertical arrows show pitch span (in semitones; ST). Durations of onset to offset of each token is given on the x axis.

4. DISCUSSION

Prosodic features are available to perform a wide range of actions. This paper has shown how teachers employ prosodic features, specifically width of pitch span, to carefully steer students towards an acceptable answer without explicitly rejecting or accepting students' answer so far. The teacher's acknowledgment "ja" (and neighbouring forms such as "jo" and "(n)ja") does not explicitly confirm nor disconfirm the adequacy of the student's response, but nevertheless makes an interpretation, and a relevant next move, available to students. We conclude this paper with a discussion on the relevance and role of prosody in third position acknowledgments and highlight the implications for teacher practice.

We have shown how acknowledgment tokens can represent less explicit, and more subtle, evaluations than third position assessments such as "exactly", "correct", and herein lies their potential – both in interactional and institutional terms. We found that acknowledgment token "ja"s with wider pitch spans were associated with treating student answers as less adequate compared to previous or subsequent evaluations with narrow pitch spans. Thus, the prosodic design of third turn acknowledgments is consequential to the ensuing evaluation sequence, in terms of how students proceed, and how teachers subsequently attempt to remedy any negative interpretation of their evaluation so far. The paper demonstrates how prosody plays a key role in directing the further trajectory of question-answer expansion sequences, without making any explicit (i.e., "on the record") negative evaluation available to the student.

It is important to highlight the relevance of prosodic features, as an integrated part of the sequential context in which they take place (Ogden, 2012). The analyst's task is to demonstrate how the participants themselves orient to the relevance of phonetic features in the context in which they take place. In this paper, we show how teachers/students differentiate systematically between a current and a previous acknowledgment token across an evaluation sequence. Thus, teachers employ prosodic features to treat the students' answers *unequally*, signalling to the students how a present acknowledgment is similar to, or differs from, a previous one. While contributing to existing research on role and relevance of prosody in interaction (Walker, 2013), this research also contributes to the field of prosody in Norwegian linguistic and interactional research, where previous research is limited. Furthermore, we argue that any research on the systematic use of acknowledgment tokens ought to take prosodic features seriously, both as part of accounting for the variation and variability of acknowledgments (in one/more language(s) and/or in specific settings), and using methodologically appropriate methods for doing so.

For the institutional task of assessing a student, also formally during oral exams, lexical restraint (e.g., "mhm", "yeah") mixed with prosodic restraint (e.g., undifferentiated pitch movement across acknowledgment tokens; undifferentiated nodding) can be a resource for allowing students to proceed with more reflection, without the teacher giving the answer away. In this paper we show how systematic manipulation of pitch span can further guide a student without making the evaluation explicit. One value of not making an evaluation explicit for the institutional task of teaching and examining, is that one can remedy a potential understanding from a student/candidate that a negative evaluation was put forward (see Extract 6). With the support of prosodic design, a "ja" can productively foreshadow how close or far the students are from an adequate answer without intervening with their process in getting there. The term "steering work" (Lee, 2007) seems an apt description of this process. The contribution we make is to pin-point specific phonetic resources governing this steering work, where one phonetic quality (wide pitch span) steers the evaluation in one direction (treating the answer so far as less adequate compared to a previous or subsequent answer),

while another quality (narrow pitch span) steers the evaluation in the opposite direction. From a pedagogical point of view, the advantage of not exposing a potential negative evaluation, or explicitly revealing the students' less adequate answer, is to avoid placing the student(s) in a position of "failing", while at the same time affiliating with the student(s) and encouraging them to continue the reflection and exploration of the answering task at hand. Thus, our research shows how teachers form their feedback based on a careful coordination of implicit (prosodic) and explicit (words and phrases) means, between and across turns of talk.

Comparing our one case of oral exam (Extract 6) with desk talk, we showed that the examiner (teacher) operates with the same norm set out in the main part of the analysis (Extracts 2-5). That is, in Extract 6 the examiner uses the prosodic resources for distinguishing "more" and "less" adequate answers set out in the previous analysis, but this time to remove any understanding from the candidate (student) that their previous answer was heading in the wrong direction. This final example shows us that educators use the systematic resources of interaction flexibly and strategically, while highlighting the very relevance of those resources and our normative orientation towards them. It is worth noting that such variation emerged when comparing desk talk, where stakes are relatively low, and oral exams, where stakes are high. This opens up avenues for further research, which could compare the communicative functions and implications of third position evaluations in oral examinations and in desk talk, and further expand research on the role of prosody in scaffolding activities including the facilitation of adequate answers to test questions.

Acknowledgments

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